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<110> Tew, Kenneth D.
Vulevic, Bojana
Chen, Zhijian

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Transporter 2 and Methods of Use Thereof

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Pro Leu Ser Asn Phe Val Pro Pro Pro Pro Ser Pro Ala Pro Ser Asp
1585 1590 1595 1600
Ser Pro Ala Ser Pro Asp Glu Asp Leu Gln Ala Trp Asn Val Ser Leu
1605 1610 1615
Pro Pro Thr Ala Gly Pro Glu Met Trp Thr Ser Ala Pro Ser Leu Pro
1620 1625 1630
Arg Leu Val Arg Glu Pro Val Arg Cys Thr Cys Ser Ala Gln Gly Thr
1635 1640 1645
Gly Phe Ser Cys Pro Ser Ser Val Gly Gly His Pro Pro Gln Met Arg
1650 1655 1660
Val Val Thr Gly Asp Ile Leu Thr Asp Ile Thr Gly His Asn Val Ser
1665 1670 1675 1680
Glu Tyr Leu Leu Phe Thr Ser Asp Arg Phe Arg Leu His Arg Tyr Gly
1685 1690 1695
Ala Ile Thr Phe Gly Asn Val Leu Lys Ser Ile Pro Ala Ser Phe Gly
1700 1705 1710
Thr Arg Ala Pro Pro Met Val Arg Lys Ile Ala Val Arg Arg Ala Ala
1715 1720 1725
Gln Val Phe Tyr Asn Asn Lys Gly Tyr His Ser Met Pro Thr Tyr Leu
1730 1735 1740
Asn Ser Leu Asn Asn Ala Ile Leu Arg Ala Asn Leu Pro Lys Ser Lys
1745 1750 1755 1760
Gly Asn Pro Ala Ala Tyr Gly Ile Thr Val Thr Asn His Pro Met Asn
1765 1770 1775
Lys Thr Ser Ala Ser Leu Ser Leu Asp Tyr Leu Leu Gln Gly Thr Asp
1780 1785 1790
Val Val Ile Ala Ile Phe Ile Ile Val Ala Met Ser Phe Val Pro Ala
1795 1800 1805
Ser Phe Val Val Phe Leu Val Ala Glu Lys Ser Thr Lys Ala Lys His
1810 1815 1820
Leu Gln Phe Val Ser Gly Cys Asn Pro Ile Ile Tyr Trp Leu Ala Asn
1825 1830 1835 1840
Tyr Val Trp Asp Met Leu Asn Tyr Leu Val Pro Ala Thr Cys Cys Val
1845 1850 1855
Ile Ile Leu Phe Val Phe Asp Leu Pro Ala Tyr Thr Ser Pro Thr Asn
1860 1865 1870
Phe Pro Ala Val Leu Ser Leu Phe Leu Leu Tyr Gly Trp Ser Ile Thr
1875 1880 1885
Pro Ile Met Tyr Pro Ala Ser Phe Trp Phe Glu Val Pro Ser Ser Ala
1890 1895 1900
Tyr Val Phe Leu Ile Val Ile Asn Leu Phe Ile Gly Ile Thr Ala Thr
1905 1910 1915 1920
Val Ala Thr Phe Leu Leu Gln Leu Phe Glu His Asp Lys Asp Leu Lys
1925 1930 1935
Val Val Asn Ser Tyr Leu Lys Ser Cys Phe Leu Ile Phe Pro Asn Tyr
1940 1945 1950
Asn Leu Gly His Gly Leu Met Glu Met Ala Tyr Asn Glu Tyr Ile Asn
1955 1960 1965
Glu Tyr Tyr Ala Lys Ile Gly Gln Phe Asp Lys Met Lys Ser Pro Phe
1970 1975 1980
Glu Trp Asp Ile Val Thr Arg Gly Leu Val Ala Met Ala Val Glu Gly
1985 1990 1995 2000
Val Val Gly Phe Leu Leu Thr Ile Met Cys Gln Tyr Asn Phe Leu Arg
2005 2010 2015
Arg Pro Gln Arg Met Pro Val Ser Thr Lys Pro Val Glu Asp Asp Val

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            2020                2025                2030
Asp Val Ala Ser Glu Arg Gln Arg Val Leu Arg Gly Asp Ala Asp Asn
        2035                2040                2045
Asp Met Val Lys Ile Glu Asn Leu Thr Lys Val Tyr Lys Ser Arg Lys
    2050                2055                2060
Ile Gly Arg Ile Leu Ala Val Asp Arg Leu Cys Leu Gly Val Arg Pro
2065                2070                2075                2080
Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys Thr Ser
                2085                2090                2095
Thr Phe Lys Met Leu Thr Gly Asp Glu Ser Thr Thr Gly Gly Glu Ala
            2100                2105                2110
Phe Val Asn Gly His Ser Val Leu Lys Glu Leu Leu Gln Val Gln Gln
        2115                2120                2125
Ser Leu Gly Tyr Cys Pro Gln Cys Asp Ala Leu Phe Asp Glu Leu Thr
    2130                2135                2140
Ala Arg Glu His Leu Gln Leu Tyr Thr Arg Leu Arg Gly Ile Ser Trp
2145                2150                2155                2160
Lys Asp Glu Ala Arg Val Val Lys Trp Ala Leu Glu Lys Leu Glu Leu
                2165                2170                2175
Thr Lys Tyr Ala Asp Lys Pro Ala Gly Thr Tyr Ser Gly Gly Asn Lys
            2180                2185                2190
Arg Lys Leu Ser Thr Ala Ile Ala Leu Ile Gly Tyr Pro Ala Phe Ile
        2195                2200                2205
Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe
    2210                2215                2220
Leu Trp Asn Leu Ile Leu Asp Leu Ile Lys Thr Gly Arg Ser Val Val
2225                2230                2235                2240
Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr Arg Leu
                2245                2250                2255
Ala Ile Met Val Asn Gly Arg Leu Arg Cys Leu Gly Ser Ile Gln His
            2260                2265                2270
Leu Lys Asn Arg Phe Gly Asp Gly Tyr Met Ile Thr Val Arg Thr Lys
        2275                2280                2285
Ser Ser Gln Ser Val Lys Asp Val Val Arg Phe Phe Asn Arg Asn Phe
    2290                2295                2300
Pro Glu Ala Met Leu Lys Glu Arg His His Thr Lys Val Gln Tyr Gln
2305                2310                2315                2320
Leu Lys Ser Glu His Ile Ser Leu Ala Gln Val Phe Ser Lys Met Glu
                2325                2330                2335
Gln Val Ser Gly Val Leu Gly Ile Glu Asp Tyr Ser Val Ser Gln Thr
            2340                2345                2350
Thr Leu Asp Asn Val Phe Val Asn Phe Ala Lys Lys Gln Ser Asp Asn
        2355                2360                2365
Leu Glu Gln Gln Glu Thr Glu Pro Pro Ser Ala Leu Gln Ser Pro Leu
    2370                2375                2380
Gly Cys Leu Leu Ser Leu Leu Arg Pro Arg Ser Ala Pro Thr Glu Leu
2385                2390                2395                2400
Arg Ala Leu Val Ala Asp Glu Pro Glu Asp Leu Asp Thr Glu Asp Glu
                2405                2410                2415
Gly Leu Ile Ser Phe Glu Glu Glu Arg Ala Gln Leu Ser Phe Asn Thr
            2420                2425                2430
Asp Thr Leu Cys
        2435
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<210> 3
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 3
ccatcctaat acgactcact atagggc 27

<210> 4
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 4
tgagtttgtc cacgcagaca accagag 27

<210> 5
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 5
actcactata gggctcgagc ggc 23

<210> 6
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 6
ccagctccac tcccaggctt ctg 23

<210> 7
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 7
ccactgggca gcgagaagtt gtc 23

<210> 8
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 8
gaagctggag ttctggcgga tct 23

<210> 9
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 9
cagaccacac tggacaatgt gttcgtg 27

<210> 10
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 10
tcatcagctt cgaggaggag cgg 23

<210> 11
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 11
ataagcttgc tgaggcggcg gagcgtggc 29

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 12
ccactgggcg agaagttgtc 20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 13
cctcattttc ccctacaacc 20

<210> 14
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 14
acctgctcca tcttgctgct gaacac 26

<210> 15
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 15
cagcggcggc aacaagcgga a 21

<210> 16
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 16
ggtgaattcg gcaggcactg ggggacttgt 30

<210> 17
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 17
tagtactcct tgggcttcct gcaccagc 28

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 18

ccagggcaga tgagggacca aaga 24

<210> 19
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 19
catccagcag gtcccccaga agc 23

<210> 20
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<221> misc_feature
<222> (24, 25, 29, 30, 34, 35)
<223> n = Inosine (I)

<400> 20
ggccacgcgt cgactagtac gggnngggnn gggnng 36

<210> 21
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 21
aaacaggttg cccttcctcc accac 25

<210> 22
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 22
ggccacgcgt cgactagtac 20

<210> 23
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 23
acagcgattg catgacaggc ag 22

<210> 24
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 24
agggagctgg ctacaccgac g 21

<210> 25
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> PCR Primer

<400> 25
cgcctgtgac cacccgcatc t 21

<210> 26
<211> 188
<212> PRT
<213> Homo Sapiens

<400> 26

Ala	Val	Asp	Gly	Leu	Ala	Leu	Asn	Phe	Tyr	Glu	Gly	Gln	Ile	Thr	Ser
1				5					10					15	
Phe	Leu	Gly	His	Asn	Gly	Ala	Gly	Lys	Thr	Thr	Thr	Met	Ser	Ile	Leu
			20					25					30		
Thr	Gly	Leu	Phe	Pro	Pro	Thr	Ser	Gly	Thr	Ala	Tyr	Ile	Leu	Gly	Lys
		35					40					45			
Asp	Ile	Arg	Ser	Glu	Met	Ser	Thr	Ile	Arg	Gln	Asn	Leu	Gly	Val	Cys
	50					55					60				
Pro	Gln	His	Asn	Val	Leu	Phe	Asp	Met	Leu	Thr	Val	Glu	Glu	His	Ile
65					70					75					80
Trp	Phe	Tyr	Ala	Arg	Leu	Lys	Gly	Leu	Ser	Glu	Lys	His	Val	Lys	Ala
				85					90					95	
Glu	Met	Glu	Gln	Met	Ala	Leu	Asp	Val	Gly	Leu	Pro	Ser	Ser	Lys	Leu
			100					105					110		
Lys	Ser	Lys	Thr	Ser	Gln	Leu	Ser	Gly	Gly	Met	Gln	Arg	Lys	Leu	Ser
		115					120					125			
Val	Ala	Leu	Ala	Phe	Val	Gly	Gly	Ser	Lys	Val	Val	Ile	Leu	Asp	Glu
	130					135					140				
Pro	Thr	Ala	Gly	Val	Asp	Pro	Tyr	Ser	Arg	Arg	Gly	Ile	Trp	Glu	Leu
145					150					155					160
Leu	Leu	Lys	Tyr	Arg	Gln	Gly	Arg	Thr	Ile	Ile	Leu	Ser	Thr	His	His
				165					170					175	
Met	Asp	Glu	Ala	Asp	Val	Leu	Gly	Asp	Arg	Ile	Ala				
			180					185							

<210> 27

<211> 183
<212> PRT
<213> Homo Sapiens

<400> 27

```
Ala Val Asp Arg Ile Cys Val Gly Ile Pro Pro Gly Glu Cys Phe Gly
 1               5                  10                  15
Leu Leu Gly Val Asn Gly Ala Gly Lys Ser Ser Thr Phe Lys Met Leu
            20                  25                  30
Thr Gly Asp Thr Thr Val Thr Arg Gly Asp Ala Phe Leu Asn Arg Asn
        35                  40                  45
Ser Ile Leu Ser Asn Ile His Glu Val His Gln Asn Met Gly Tyr Cys
    50                  55                  60
Pro Gln Phe Asp Ala Ile Thr Glu Leu Leu Thr Gly Arg Glu His Val
65                  70                  75                  80
Glu Phe Phe Ala Leu Leu Arg Gly Val Pro Glu Lys Glu Val Gly Lys
                85                  90                  95
Val Gly Glu Trp Ala Ile Arg Lys Leu Gly Leu Val Lys Tyr Gly Glu
            100                 105                 110
Lys Tyr Ala Gly Asn Tyr Ser Gly Gly Asn Lys Arg Lys Leu Ser Thr
        115                 120                 125
Ala Met Ala Leu Ile Gly Gly Pro Pro Val Val Phe Leu Asp Glu Pro
    130                 135                 140
Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe Leu Trp Asn Cys Ala
145                 150                 155                 160
Leu Ser Val Val Lys Glu Gly Arg Ser Val Val Leu Thr Ser His Ser
                165                 170                 175
Met Glu Glu Cys Glu Ala Leu
            180
```

<210> 28
<211> 187
<212> PRT
<213> Mus musculus

<400> 28

```
Ala Leu Asn Lys Leu Ser Leu Asn Leu Tyr Glu Asn Gln Val Val Ser
 1               5                  10                  15
Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Met Ser Ile Leu
            20                  25                  30
Thr Gly Leu Phe Pro Pro Thr Ser Gly Ser Ala Thr Ile Tyr Gly His
        35                  40                  45
Asp Ile Arg Thr Glu Met Asp Glu Ile Arg Lys Asn Leu Gly Met Cys
    50                  55                  60
Pro Gln His Asn Val Leu Phe Asp Arg Leu Thr Val Glu Glu His Leu
65                  70                  75                  80
Trp Phe Tyr Ser Arg Leu Lys Ser Met Ala Gln Glu Glu Ile Arg Lys
                85                  90                  95
Glu Thr Asp Lys Met Ile Glu Asp Leu Glu Leu Ser Asn Lys Arg His
            100                 105                 110
Ser Leu Val Gln Thr Leu Ser Gly Gly Met Lys Arg Lys Leu Ser Val
        115                 120                 125
Ala Ile Ala Phe Val Gly Gly Ser Arg Ala Ile Ile Leu Asp Glu Pro
    130                 135                 140
Thr Ala Gly Val Asp Pro Tyr Ala Arg Arg Ala Ile Trp Asp Leu Ile
145                 150                 155                 160
Leu Lys Tyr Lys Pro Gly Arg Thr Ile Leu Leu Ser Thr His His Met
                165                 170                 175
Asp Glu Ala Asp Leu Leu Gly Asp Arg Ile Ala
            180                 185
```

<210> 29
<211> 184
<212> PRT
<213> Mus musculus

<400> 29

```
Ala Val Asp Arg Leu Cys Leu Gly Val Cys Val Pro Gly Glu Cys Phe
 1               5                  10                  15
Gly Leu Leu Gly Val Asn Gly Ala Gly Lys Thr Ser Thr Phe Lys Met
            20                  25                  30
Leu Thr Gly Asp Glu Ser Thr Thr Gly Gly Glu Ala Phe Val Asn Gly
        35                  40                  45
His Ser Val Leu Lys Asp Leu Leu Gln Val Gln Gln Ser Leu Gly Tyr
    50                  55                  60
Cys Pro Gln Phe Asp Ala Leu Phe Asp Glu Leu Thr Ala Arg Glu His
65                  70                  75                  80
Leu Gln Leu Tyr Thr Arg Leu Arg Gly Ile Pro Trp Lys Asp Glu Ala
                85                  90                  95
Gln Val Val Lys Trp Ala Leu Glu Lys Leu Glu Leu Thr Lys Tyr Ala
            100                 105                 110
Asp Lys Pro Ala Gly Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu Ser
        115                 120                 125
Thr Ala Ile Ala Leu Ile Gly Tyr Pro Ala Phe Ile Phe Leu Asp Glu
    130                 135                 140
Pro Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe Leu Trp Asn Leu
145                 150                 155                 160
Ile Leu Asp Leu Ile Lys Thr Gly Arg Ser Val Val Leu Thr Ser His
                165                 170                 175
Ser Met Glu Glu Cys Glu Ala Leu
            180
```

<210> 30
<211> 187
<212> PRT
<213> Homo sapiens

<400> 30

```
Ala Leu Asn Lys Leu Ser Leu Asn Leu Tyr Glu Asn Gln Val Val Ser
 1               5                  10                  15
Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Met Ser Ile Leu
            20                  25                  30
Thr Gly Leu Phe Pro Pro Thr Ser Gly Ser Ala Thr Ile Tyr Gly His
        35                  40                  45
Asp Ile Arg Thr Glu Met Asp Glu Ile Arg Lys Asn Leu Gly Met Cys
    50                  55                  60
Pro Gln His Asn Val Leu Phe Asp Arg Leu Thr Val Glu Glu His Leu
65                  70                  75                  80
Trp Phe Tyr Ser Arg Leu Lys Ser Met Ala Gln Glu Glu Ile Arg Arg
                85                  90                  95
Glu Met Asp Lys Met Ile Glu Asp Leu Glu Leu Ser Asn Lys Arg His
            100                 105                 110
Ser Leu Val Gln Thr Leu Ser Gly Gly Met Lys Arg Lys Leu Ser Val
        115                 120                 125
Ala Ile Ala Phe Val Gly Gly Ser Arg Ala Ile Ile Leu Asp Glu Pro
    130                 135                 140
Thr Ala Gly Val Asp Pro Tyr Ala Arg Arg Ala Ile Trp Asp Leu Ile
145                 150                 155                 160
Leu Lys Tyr Lys Pro Gly Arg Thr Ile Leu Leu Ser Thr His His Met
```

```
                165                 170                 175
Asp Glu Ala Asp Leu Leu Gly Asp Arg Ile Ala
            180                 185
```

<210> 31
<211> 183
<212> PRT
<213> Homo sapiens

<400> 31

```
Ala Val Asp Arg Leu Cys Leu Gly Val Arg Pro Gly Glu Cys Phe Gly
 1               5                  10                  15
Leu Leu Gly Val Asn Gly Ala Gly Lys Thr Ser Thr Phe Lys Met Leu
            20                  25                  30
Thr Gly Asp Glu Ser Thr Thr Gly Gly Glu Ala Phe Val Asn Gly His
        35                  40                  45
Ser Val Leu Lys Glu Leu Leu Gln Val Gln Gln Ser Leu Gly Tyr Cys
    50                  55                  60
Pro Gln Cys Asp Ala Leu Phe Asp Glu Leu Thr Ala Arg Glu His Leu
65                  70                  75                  80
Gln Leu Tyr Thr Arg Leu Arg Gly Ile Ser Trp Lys Asp Glu Ala Arg
                85                  90                  95
Val Val Lys Trp Ala Leu Glu Lys Leu Glu Leu Thr Lys Tyr Ala Asp
            100                 105                 110
Lys Pro Ala Gly Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu Ser Thr
        115                 120                 125
Ala Ile Ala Leu Ile Gly Tyr Pro Ala Phe Ile Phe Leu Asp Glu Pro
    130                 135                 140
Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe Leu Trp Asn Leu Ile
145                 150                 155                 160
Leu Asp Leu Ile Lys Thr Gly Arg Ser Val Val Leu Thr Ser His Ser
                165                 170                 175
Met Glu Glu Cys Glu Ala Leu
            180
```

<210> 32
<211> 187
<212> PRT
<213> Homo sapiens

<400> 32

```
Ala Val Arg Asp Leu Asn Leu Asn Leu Tyr Glu Gly Gln Ile Thr Val
 1               5                  10                  15
Leu Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Leu Ser Met Leu
            20                  25                  30
Thr Gly Leu Phe Pro Pro Thr Ser Gly Arg Ala Tyr Ile Ser Gly Tyr
        35                  40                  45
Glu Ile Ser Gln Asp Met Val Gln Ile Arg Lys Ser Leu Gly Leu Cys
    50                  55                  60
Pro Gln His Asp Ile Leu Phe Asp Asn Leu Thr Val Ala Glu His Leu
65                  70                  75                  80
Tyr Phe Tyr Ala Gln Leu Lys Gly Leu Ser Arg Gln Lys Cys Pro Glu
                85                  90                  95
Glu Val Lys Gln Met Leu His Ile Ile Gly Leu Glu Asp Lys Trp Asn
            100                 105                 110
Ser Arg Ser Arg Phe Leu Ser Gly Gly Met Arg Arg Lys Leu Ser Ile
        115                 120                 125
Gly Ile Ala Leu Ile Ala Gly Ser Lys Val Leu Ile Leu Asp Glu Pro
    130                 135                 140
```

```
Thr Ser Gly Met Asp Ala Ile Ser Arg Arg Ala Ile Trp Asp Leu Leu
145                 150                 155                 160
Gln Arg Gln Lys Ser Asp Arg Thr Ile Val Leu Thr Thr His Phe Met
                165                 170                 175
Asp Glu Ala Asp Leu Leu Gly Asp Arg Ile Ala
            180                 185
```

<210> 33
<211> 183
<212> PRT
<213> Homo sapiens

<400> 33

```
Ala Val Asp Arg Leu Ser Leu Ala Val Gln Lys Gly Glu Cys Phe Gly
 1               5                  10                  15
Leu Leu Gly Phe Asn Gly Ala Gly Lys Thr Thr Thr Phe Lys Met Leu
            20                  25                  30
Thr Gly Glu Glu Ser Leu Thr Ser Gly Asp Ala Phe Val Gly Gly His
        35                  40                  45
Arg Ile Ser Ser Asp Val Gly Lys Val Arg Gln Arg Ile Gly Tyr Cys
    50                  55                  60
Pro Gln Phe Asp Ala Leu Leu Asp His Met Thr Gly Arg Glu Met Leu
65                  70                  75                  80
Val Met Tyr Ala Arg Leu Arg Gly Ile Pro Glu Arg His Ile Gly Ala
                85                  90                  95
Cys Val Glu Asn Thr Leu Arg Gly Leu Leu Leu Glu Pro His Ala Asn
            100                 105                 110
Lys Leu Val Arg Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu Ser Thr
        115                 120                 125
Gly Ile Ala Leu Ile Gly Glu Pro Ala Val Ile Phe Leu Asp Glu Pro
    130                 135                 140
Ser Thr Gly Met Asp Pro Val Ala Arg Arg Leu Leu Trp Asp Thr Val
145                 150                 155                 160
Ala Arg Ala Arg Glu Ser Gly Lys Ala Ile Ile Ile Thr Ser His Ser
                165                 170                 175
Met Glu Glu Cys Glu Ala Leu
            180
```

<210> 34
<211> 187
<212> PRT
<213> Homo sapiens

<400> 34

```
Ala Val Asp Arg Leu Asn Ile Thr Phe Tyr Glu Asn Gln Ile Thr Ala
 1               5                  10                  15
Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Leu Ser Ile Leu
            20                  25                  30
Thr Gly Leu Leu Pro Pro Thr Ser Gly Thr Val Leu Val Gly Gly Arg
        35                  40                  45
Asp Ile Glu Thr Ser Leu Asp Ala Val Arg Gln Ser Leu Gly Met Cys
    50                  55                  60
Pro Gln His Asn Ile Leu Phe His His Leu Thr Val Ala Glu His Met
65                  70                  75                  80
Leu Phe Tyr Ala Gln Leu Lys Gly Lys Ser Gln Glu Glu Ala Gln Leu
                85                  90                  95
Glu Met Glu Ala Met Leu Glu Asp Thr Gly Leu His His Lys Arg Asn
            100                 105                 110
Glu Glu Ala Gln Asp Leu Ser Gly Gly Met Gln Arg Lys Leu Ser Val
```

```
        115                 120                 125
Ala Ile Ala Phe Val Gly Asp Ala Lys Val Val Ile Leu Asp Glu Pro
    130                 135                 140
Thr Ser Gly Val Asp Pro Tyr Ser Arg Arg Ser Ile Trp Asp Leu Leu
145                 150                 155                 160
Leu Lys Tyr Arg Ser Gly Arg Thr Ile Ile Met Ser Thr His His Met
                165                 170                 175
Asp Glu Ala Asp Leu Leu Gly Asp Arg Ile Ala
            180                 185
```

<210> 35
<211> 183
<212> PRT
<213> Homo Sapiens

<400> 35

```
Ala Val Asp Arg Leu Cys Val Gly Val Arg Pro Gly Glu Cys Phe Gly
 1               5                  10                  15
Leu Leu Gly Val Asn Gly Ala Gly Lys Thr Thr Thr Phe Lys Met Leu
            20                  25                  30
Thr Gly Asp Thr Thr Val Thr Ser Gly Asp Ala Thr Val Ala Gly Lys
        35                  40                  45
Ser Ile Leu Thr Asn Ile Ser Glu Val His Gln Asn Met Gly Tyr Cys
    50                  55                  60
Pro Gln Phe Asp Ala Ile Asp Glu Leu Leu Thr Gly Arg Glu His Leu
65                  70                  75                  80
Tyr Leu Tyr Ala Arg Leu Arg Gly Val Pro Ala Glu Glu Ile Glu Lys
                85                  90                  95
Val Ala Asn Trp Ser Ile Lys Ser Leu Gly Leu Thr Val Tyr Ala Asp
            100                 105                 110
Cys Leu Ala Gly Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu Ser Thr
        115                 120                 125
Ala Ile Ala Leu Ile Gly Cys Pro Pro Leu Val Leu Leu Asp Glu Pro
    130                 135                 140
Thr Thr Gly Met Asp Pro Gln Ala Arg Arg Met Leu Trp Asn Val Ile
145                 150                 155                 160
Val Ser Ile Ile Arg Lys Gly Arg Ala Val Val Leu Thr Ser His Ser
                165                 170                 175
Met Glu Glu Cys Glu Ala Leu
            180
```

<210> 36
<211> 13
<212> PRT
<213> Homo sapiens

<400> 36

```
Gly Gln Ser Arg Lys Leu Asp Gly Gly Trp Leu Lys Val
 1               5                  10
```